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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/728,745	12/08/2003	Yuji Kamo	12219/43	9386

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KENYON & KENYON
Suite 700
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Washington, DC 20005

EXAMINER

THOMPSON, TIMOTHY J

ART UNIT	PAPER NUMBER
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2873

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/27/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/728,745

Applicant(s)

KAMO, YUJI

Examiner

Timothy J. Thompson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20, 24-31, 35-41 and 45-47 is/are pending in the application.
- 4a) Of the above claim(s) 21-23, 32-34, 42-44 and 48-50 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-17, 19, 20, 26-28, 30, 35-39 and 45 is/are allowed.
- 6) ☒ Claim(s) 18, 24, 25, 29, 31, 40, 41, 46 and 47 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 June 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 18, 29 are rejected under 35 U.S.C. 102(b) as being anticipated by Saito(U.S. Pat. No. 6,466,377).

Regarding claim 18, Saito discloses in order from an object side thereof, an aperture stop(fig 4, 4), a first positive lens(fig 4, 1), a second negative lens(fig 4, 2) and a third positive lens(fig 4, 3), wherein there are a total of three lens elements, with satisfaction of the following condition: $1.5 < d/(f \tan \theta) < 3.0$ (example 2).

Regarding claim 29, Saito discloses in order from an object side thereof, an aperture stop(fig 12, 4), a first positive lens(fig 12, 1), a second negative lens(fig 12, 2) and a third positive lens(fig 12, 3), wherein there are a total of three lens elements, with satisfaction of the following condition: $1 < d/f_{12}/f < 4.0$ (example 6).

Claim 25 is rejected under 35 U.S.C. 102(b) as being anticipated by Ning(U.S. Pat. No. 6,441,971).

Regarding claim 25, Ning discloses in order from an object side thereof, an aperture stop(fig 1, 22), a first positive lens(fig 1, 16), a second negative lens(fig 1, 18)

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and a third positive lens(fig 1, 20), wherein the second lens has an aspheric surface(table 20).

Claims 40, 46 are rejected under 35 U.S.C. 102(b) as being anticipated by Saito et al.(U.S. Pat. No. 6,466,377).

Regarding claim 40, Saito discloses, in order from an object side thereof, an aperture stop(fig 4, 4), a first positive lens(fig 4, 1), a second negative lens(fig 4, 2) and a third positive meniscus lens that is convex on an object side thereof(fig 4, 3), wherein there are a total of three lens elements(fig 1).

Regarding claim 46, Saito discloses, in order from an object side thereof, an aperture stop(fig 4, 4), a first positive lens(fig 4, 1), a second negative meniscus lens that is convex on an object side thereof (fig 4, 2) and a third positive lens (fig 4, 3), wherein there are a total of three lens elements(fig 4); $0.2 < r_{2f}/r_{3f} < 3.5$ (Example 2).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ning(U.S. Pat. No. 6,441,971) in view of Shingematsu(U.S. Pat. No. 6,259,508).

Regarding claim 24, Ning discloses in order from an object side thereof, an aperture stop(fig 1, 22), a first positive lens(fig 1, 16), a second negative lens(fig 1, 18) and a third positive lens(fig 1, 20), Ning does not disclose the first lens has an aspheric surface. However, Shingematsu discloses any lens unit and any lens surface can has an aspheric surface so as to correct for aberration(claim 21). It would have been obvious to one skilled in the art at the time of the invention to place an aspherical surface on the first lens as shown by Shingematsu, with the lens device of of Ning, since as shown by Shingematsu, placing an aspherical surface on the first lens is commonly done so as to correct for aberrations.

Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Saito et al.(U.S. Pat. No. 6,466,377) in view of Kamo(U.S. Pat. No. 2004/0223068).

Regarding claim 31, Saito discloses, in order from an object side thereof, an aperture stop(fig 4, 4), a first positive meniscus lens(fig 4, 1), a second negative lens(fig 4, 2) and a third positive meniscus lens that is convex on an object side thereof(fig 4, 3), wherein there are a total of three lens elements(fig 1). Ning does not disclose the rim surface of the aperture is inclined down at an angle of inclination greater that the angle of incidence of a farthest off-axis light beam. However, Kamo discloses the rim surface of the aperture is inclined down at an angle of inclination greater that the angle of incidence of a farthest off-axis light beam (para 0272). It would have been obvious to

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one skilled in the art at the time of the invention to angle the aperture an angle of inclination greater than the angle of incidence of a farthest off-axis light beam as shown by Kamo, with the lens device of Ning, since as shown by Kamo, angling the aperture at an angle of inclination greater than the angle of incidence of a farthest off-axis light beam is commonly done so as to improve the image quality.

Claim 41, 47 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ning(U.S. Pat. No. 6,441,971) in view of Kamo(U.S. Pat. No. 2004/0223068).

Regarding claim 41, 47, Ning discloses in order from an object side thereof, an aperture stop(fig 1, 22), a first positive lens(fig 1, 16), a second negative lens(fig 1, 18) and a third positive lens(fig 1, 20), Ning does not disclose the rim surface of the aperture is inclined down at an angle of inclination greater than the angle of incidence of a farthest off-axis light beam. However, Kamo discloses the rim surface of the aperture is inclined down at an angle of inclination greater than the angle of incidence of a farthest off-axis light beam (para 0272). It would have been obvious to one skilled in the art at the time of the invention to angle the aperture an angle of inclination greater than the angle of incidence of a farthest off-axis light beam as shown by Kamo, with the lens device of Ning, since as shown by Kamo, angling the aperture at an angle of inclination greater than the angle of incidence of a farthest off-axis light beam is commonly done so as to improve the image quality.

Allowable Subject Matter

Claims 1-17, 19, 20, 26-28, 30, 35-39, 45 are allowed.

The following is an examiner's statement of reasons for allowance: The prior art taken either singularity or in combination fails to anticipate or fairly suggest the limitations of the independent claim, in such a manner that a rejection under 35 U.S.C. 102 or 103 would be proper. The prior art fails to teach a combination of all the claimed features as presented in independent claim 1-17, 19, 20, 26-28, 30, 35-39, 45, with the allowable features being; the specific shapes of the lenses; the conditional formula pertaining to; the axial radius of curvature, the focal length of the lenses. Therefore claim 1-17, 19, 20, 26-28, 30, 35-39, 45 is allowed.

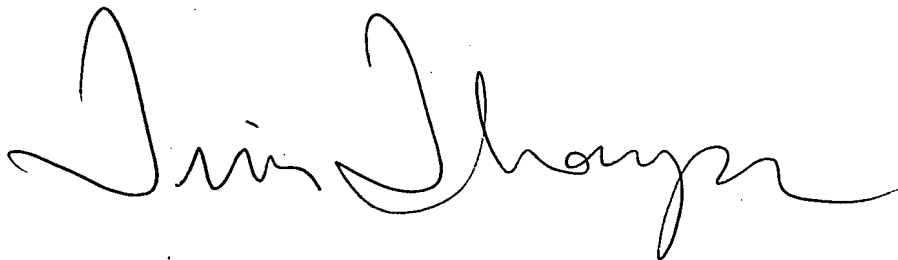
Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy J. Thompson whose telephone number is (571) 272-2342. The examiner can normally be reached on 8:30 AM - 6:00 Pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Mack can be reached on (571) 272-2333. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Tim Thompson', with a stylized, cursive script.

**TIMOTHY THOMPSON
PRIMARY EXAMINER**